WHAT IS CLAIMED IS:

1. A method for predicting burn-in conditions, comprising:

identifying a baseline IDDQ, a baseline temperature, and a baseline IDDQ current density based on a plurality of existing burn-in data for one or more existing devices;

determining a theoretical IDDQ current density for a device;

determining a ratio of the theoretical IDDQ current density to the baseline IDDQ current density;

determining a theoretical process metric for the device at the baseline temperature based on the ratio and the baseline IDDQ;

measuring a process metric for an actual device;

comparing the process metric for the actual device and the theoretical process metric for the device; and

determining an actual burn-in temperature for the actual device based on the comparison.

2. The method of Claim 1, further comprising storing the actual burn-in temperature in a database.

3. The method of Claim 1, wherein identifying the baseline IDDQ based on the plurality of existing burn-in data for one or more existing devices comprises:

plotting a process metric for each device;

plotting a burn-in temperature for each device;

plotting a burn-in voltage for each device; and

utilizing regression analysis to express the baseline IDDQ as a function of a baseline process metric, a baseline burn-in temperature, and a baseline burn-in voltage.

4. The method of Claim 3, wherein the baseline IDDQ is expressed as

$$\text{baseline IDDQ} = 10^{[w+x(V)+y(T)+z(N2P)]}$$

where V = a baseline voltage; T = the baseline temperature; and N2P = a baseline process metric.

5. The method of Claim 1, wherein measuring the process metric for the actual device comprises averaging a plurality of process metrics for respective actual devices formed on a single wafer.

6. The method of Claim 1, wherein measuring the process metric for the actual device comprises averaging a plurality of process metrics for respective actual devices formed on a plurality of wafers of a lot.

7. The method of Claim 1, wherein determining the actual burn-in temperature for the actual device based on the comparison comprises:

determining a difference between the process metric for the actual device and the theoretical process metric for the device; and

adjusting the baseline temperature if the difference exceeds a predetermined difference.

8. The method of Claim 7, wherein the predetermined difference is a process metric of one hundred.

9. The method of Claim 7, wherein adjusting the baseline temperature comprises adjusting the baseline temperature between ten and fifteen degrees Celsius.

10. A method for predicting burn-in conditions, comprising:

identifying a plurality of baseline conditions based on a plurality of existing burn-in data for one or more existing devices, comprising:

determining a baseline process metric;

determining a baseline burn-in temperature;

determining a baseline burn-in voltage;

determining a baseline IDDQ expressed as a function of the baseline process metric, the baseline burn-in temperature, and the baseline burn-in voltage; and

determining a baseline IDDQ current density;

determining a theoretical IDDQ, a theoretical area, and a theoretical IDDQ current density for a device;

determining a ratio of the theoretical IDDQ current density to the baseline IDDQ current density;

determining a theoretical process metric for the device at the baseline temperature based on the ratio and the baseline IDDQ;

measuring a process metric for an actual device;

determining a difference between the process metric for the actual device and the theoretical process metric for the device; and

adjusting the baseline temperature if the difference exceeds a predetermined difference.

11. The method of Claim 10, further comprising storing the actual burn-in temperature in a database.

12. The method of Claim 10, wherein identifying the baseline IDDQ based on the plurality of existing burn-in data for one or more existing devices comprises:

plotting a process metric for each device;

plotting a burn-in temperature for each device;

plotting a burn-in voltage for each device; and

utilizing regression analysis to express the baseline IDDQ as a function of a baseline process metric, a baseline burn-in temperature, and a baseline burn-in voltage.

13. The method of Claim 11, wherein the baseline IDDQ is expressed as

$$\text{baseline IDDQ} = 10^{[w+x(V)+y(T)+z(N2P)]}$$

where V = a baseline voltage; T = the baseline temperature; and N2P = a baseline process metric.

14. The method of Claim 10, wherein measuring the process metric for the actual device comprises averaging a plurality of process metrics for respective actual devices formed on a single wafer.

15. The method of Claim 10, wherein measuring the process metric for the actual device comprises averaging a plurality of process metrics for respective actual devices formed on a plurality of wafers of a lot.

16. The method of Claim 10, wherein the predetermined difference is a process metric of one hundred.

17. The method of Claim 10, wherein adjusting the baseline temperature comprises adjusting the baseline temperature between ten and fifteen degrees Celsius.

18. A method for predicting burn-in conditions, comprising:

receiving existing burn-in data for a plurality of existing devices;

plotting respective process metrics for the exiting devices;

plotting respective burn-in temperatures for the existing devices;

plotting respective burn-in voltages for the existing devices;

utilizing statistical analysis to express a baseline IDDQ as a function of a baseline process metric, a baseline burn-in temperature, and a baseline burn-in voltage based on the respective process metrics, the respective burn-in temperatures, and the respective burn-in voltages.

identifying a baseline IDDQ current density from the existing burn-in data;

determining a theoretical IDDQ current density for a device;

determining a ratio of the theoretical IDDQ current density to the baseline IDDQ current density;

determining a theoretical process metric for the device at the baseline temperature based on the ratio and the baseline IDDQ;

measuring a process metric for an actual device;

determining a difference between the process metric for the actual device and the theoretical process metric for the device; and

adjusting the baseline temperature between ten and fifteen degrees Celsius if the difference exceeds approximately one hundred.

19. The method of Claim 18, wherein the baseline process metric is between 1250 and 1450 and the baseline burn-in temperature is between 95°C and 115°C.

20. The method of Claim 18, wherein the baseline IDDQ current density is between 0.05 and 0.15.